

16310 U.S. PTO
030204

PTO/SB/05 (03-01)

Approved for use through 10/31/2002. OMB 0851-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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UTILITY PATENT APPLICATION TRANSMITTAL

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Attorney Docket No. **HSJ920030268US1**

First Inventor **Matthew J. Carey**

Title **MAGNETORESISTIVE SENSOR WITH ANTIFERROMAGNETIC EXCHANGE COUPLED
STRUCTURE HAVING UNDERLAYER FOR ENHANCING CHEMICAL-ORDERING IN THE
ANTIFERROMAGNETIC LAYER**

Express Mail Label No. **EL 995203059 US**

APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents.

1. ☒ Fee Transmittal Form (e.g., PTO/SB/17)
(Submit an original and a duplicate for fee processing)
2. ☐ Applicant claims small entity status.
See 37 CFR 1.27.
3. ☒ Specification [Total Pages **14**]
(preferred arrangement set forth below)
 - Descriptive title of the invention
 - Cross Reference to Related Applications
 - Statement Regarding Fed sponsored R & D
 - Reference to sequence listing, a table, or a computer program listing appendix
 - Background of the Invention
 - Brief Summary of the Invention
 - Brief Description of the Drawings (if filed)
 - Detailed Description
 - Claim(s)
 - Abstract of the Disclosure
4. ☒ Drawing(s) (35 U.S.C. 113) [Total Sheets **2**]
5. Oath or Declaration [Total Pages **6**]
 - a. ☒ Newly executed (original or copy)
 - b. ☐ Copy from a prior application (37 CFR 1.63 (d))
(for continuation/divisional with Box 18 completed)
 - i. ☐ **DELETION OF INVENTOR(S)**
Signed statement attached deleting inventor(s) named in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b).
6. ☐ Application Data Sheet. See 37 CFR 1.76

ADDRESS TO: Assistant Commissioner for Patents
Box Patent Application
Washington, DC 20231

7. ☐ CD-ROM or CD-R in duplicate, large table or Computer Program (Appendix)
8. Nucleotide and/or Amino Acid Sequence Submission (if applicable, all necessary)
 - a. ☐ Computer Readable Form (CRF)
 - b. Specification Sequence Listing on:
 - i. ☐ CD-ROM or CD-R (2 copies); or
 - ii. ☐ paper
 - c. ☐ Statements verifying identity of above copies

ACCOMPANYING APPLICATION PARTS

9. ☒ Assignment Papers (cover sheet & document(s))
10. ☐ 37 CFR 3.73(b) Statement (when there is an assignee) ☒ Power of Attorney
11. ☐ English Translation Document (if applicable)
12. ☒ Information Disclosure Statement (IDS)/PTO-1449 ☐ Copies of IDS Citations
13. ☐ Preliminary Amendment
14. ☒ Return Receipt Postcard (MPEP 503) (Should be specifically itemized)
15. ☐ Certified Copy of Priority Document(s) (if foreign priority is claimed)
16. ☐ Nonpublication Request under 35 U.S.C. 122 (b)(2)(B)(i). Applicant must attach form PTO/SB/35 or its equivalent.
17. ☐ Other: _____

18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in a preliminary amendment, or in an Application Data Sheet under 37 CFR 1.76:

☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No.: _____

Prior application information: Examiner: _____ Group Art Unit: _____

For CONTINUATION OR DIVISIONAL APPS only: The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

19. CORRESPONDENCE ADDRESS

☐ Customer Number or Bar Code Label **(Insert Customer No. or Attach bar code label here)** or ☒ Correspondence address below

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Douglas R. Millett

Registration No. (Attorney/Agent)

31,784

Signature

[Signature]

Date

3/2/04

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22278 U.S. PTO
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PTO/SB/17 (10-01)

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**FEE TRANSMITTAL
for FY 2004**

Patent fees are subject to annual revision.

TOTAL AMOUNT OF PAYMENT(\$)**828.00****Complete if Known**

Application Number

Filing Date

First Named Inventor

Matthew J. Carey

Examiner Name

Group Art Unit

Attorney Docket No.

HSJ920030268US1**METHOD OF PAYMENT**

- 1.
- ☒
- The Commissioner is hereby authorized to charge indicated fees and credit any overpayments to:

Deposit
Account
Number**502587**Deposit
Account
Name**Hitachi Global Storage Technologies**

- ☒
- Charge Any Additional Fee Required
-
- Under 37 CFR 1.16 and 1.17

☐ Applicant claims small entity status.
See 37 CFR 1.27

- 2.
- ☐
- Payment Enclosed:**

☐ Check ☐ Credit card ☐ Money
Order ☐ Other**FEE CALCULATION****1. BASIC FILING FEE**

Large Entity Small Entity

Fee Fee Fee Fee
Code (\$) Code (\$) Fee Description

1001	770	2001	385	Utility filing fee	770.00
1002	340	2002	170	Design filing fee	
1003	530	2003	265	Plant filing fee	
1004	770	2004	385	Reissue filing fee	
1005	160	2005	80	Provisional filing fee	

SUBTOTAL (1) (\$)**770.00****2. EXTRA CLAIM FEES**

Total Claims	21	-20** =	1	X	18.00	=	18.00
Independent Claims	2	-3** =	0	X	86.00	=	0.00
Multiple Dependent							

Large Entity Small Entity

Fee Fee Fee Fee
Code (\$) Code (\$) Fee Description

1202	18	2202	9	Claims in excess of 20	
1201	86	2201	43	Independent claims in excess of 3	
1203	290	2203	145	Multiple dependent claim, if not paid	
1204	86	2204	43	** Reissue independent claims over original patent	
1205	18	2205	9	** Reissue claims in excess of 20 and over original patent	

SUBTOTAL (2) (\$)**18.00**

**or number previously paid, if greater; For Reissues, see above

FEE CALCULATION (continued)**3. ADDITIONAL FEES**

Large Entity Fee Code	Large Entity Fee Code	Small Entity Fee Code	Small Entity Fee Code	Fee Description	Fee Paid
1051	130	205	65	Surcharge - late filing fee or oath	
1052	50	227	25	Surcharge - late provisional filing fee or cover sheet	
1053	130	139	130	Non-English specification	
1812	2,520	147	2,520	For filing a request for <i>ex parte</i> reexamination	
1804	920*	112	920*	Requesting publication of SIR prior to Examiner action	
1805	1,840*	113	1,840*	Requesting publication of SIR after Examiner action	
1251	110	215	55	Extension for reply within first month	
1252	420	216	205	Extension for reply within second month	
1253	950	217	465	Extension for reply within third month	
1254	1,480	218	725	Extension for reply within fourth month	
1255	2,010	228	985	Extension for reply within fifth month	
1401	330	219	160	Notice of Appeal	
1402	330	220	160	Filing a brief in support of an appeal	
1403	290	221	140	Request for oral hearing	
1451	1,510	138	1,510	Petition to institute a public use proceeding	
1452	110	240	55	Petition to revive - unavoidable	
1453	1,330	241	650	Petition to revive - unintentional	
1501	1,330	242	650	Utility issue fee (or reissue)	
1502	480	243	235	Design issue fee	
1503	640	244	310	Plant issue fee	
1460	130	122	130	Petitions to the Commissioner	
1807	50	123	50	Processing fee under 37 CFR 1.17(q)	
1806	180	126	180	Submission of Information Disclosure Stmt	
8021	40	581	40	Recording each patent assignment per property (times number of properties)	40
1809	770	246	370	Filing a submission after final rejection (37 CFR § 1.129(a))	
1810	770	249	370	For each additional invention to be examined (37 CFR § 1.129(b))	
1801	770	279	375	Request for Continued Examination (RCE)	
1802	900	169	900	Request for expedited examination of a design application	

Other fee (specify)

*Reduced by Basic Filing Fee Paid

SUBTOTAL (3) (\$)**40.00****SUBMITTED BY**

Name (Print/Type)

Douglas R. MillettRegistration No.
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(408) 717-5491

Signature

Date

3/2/04**WARNING: Information on this form may become public. Credit card information should not
be included on this form. Provide credit card information and authorization on PTO-2038.**

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the application of :
Matthew J. Carey et al. : Group Art Unit: Not Yet Assigned
Serial No. Not Yet Assigned : Examiner: Not Yet Assigned

For: "Magnetoresistive Sensor With Antiferromagnetic Exchange Coupled Structure
Having Underlayer For Enhancing Chemical-Ordering In The Antiferromagnetic
Layer"


Assistant Commissioner of Patents and Trademarks
Alexandria, VA 22313-1450

EXPRESS MAIL CERTIFICATE

I hereby certify that the above paper/fee is being deposited with the United States Postal Service
as _Express Mail Post Office to Addressee_ service in an envelope addressed to the Assistant
Commissioner for Patents and Trademarks, Alexandria, VA 22313-1450 on March 2, 2004.

Express Mail NO.: EL 995203059 US

Person mailing paper/fee: Mary Lou Domenici

Signature  _____